PREVIOUS YEAR PAPER

SSC MTS 2023 — 12 September 2023, Shift 3

SSC MTS & Havaldar · 12 September 2023 · 4:00 PM - 6:00 PM

83 of the paper's 90 questions · marks per question not printed on the response sheet

Left out of the original paper: 7 (any question that needs a figure or formatting we cannot show, has no answer in the response sheet, or could not be checked against a second copy of the paper).

Questions from the Staff Selection Commission's paper of 12 September 2023, 4:00 PM - 6:00 PM. Each question is followed by its answer, and the answer key is repeated on the last page.

Take it as a timed practice test: exambharo.com/ssc-mts/previous-year-papers/ssc-mts-2023-12-sep-shift-3/

Numerical and Mathematical Ability

1.

A seller marked the price of a sofa 25% more than its cost price. If he allows 12% discount on the marked price to the customer, then what is his gain percentage? If the cost price of the sofa is ₹15,000, then what is his gain money?

(a)

9%; ₹1,480

(b)

8%; ₹1,350

(c)

10%; ₹1,500

(d)

9.5%; ₹1,600

Answer: (c)

2.

Lucknow Shatabdi Express leaves Varanasi at 3:30 p.m. and reaches Lucknow at 8:30 p.m. on the same day. The average speed of the train is 140 km/h. What is the distance (in km) from Varanasi to Lucknow?

(a)

725

(b)

675

(c)

750

(d)

700

Answer: (d)

3.

The time taken by a boat to cover a distance of x km upstream is double the time taken by the boat to cover the same distance downstream. The sum of the speeds of the boat and the stream is 90 km/h. The speed of the stream is ____ km/h.

(a)

22.5

(b)

37.5

(c)

27.5

(d)

33.5

Answer: (a)

4.

Find the volume of a cuboid whose dimensions are 34 m, 7 m and 4 m.

(a)

$952\ m^3$

(b)

$476\ m^3$

(c)

$238\ m^3$

(d)

$1904\ m^3$

Answer: (a)

6.

Aditya sold two bags for ₹630 each. On one bag he gains 33% and on the other he losses 33%. Find his gain or loss per cent on the whole transaction.

(a)

12.37% gain

(b)

10.89% gain

(c)

10.89% loss

(d)

12.37% loss

Answer: (c)

7.

In a subject, there are 40 marks for practical and 110 marks for theory. In another subject, the practical marks are 60 and the theory marks are 40. If R gets an average mark of 40 in practical and an average mark of 60 in theory, then his average marks per subject are _____.

(a)

80

(b)

60

(c)

100

(d)

40

Answer: (c)

8.

If the average of 7, x, 13, 16 and 9 is 10, then the value of x is:

(a)

4

(b)

6

(c)

8

(d)

5

Answer: (d)

9.

The simple interest on a certain sum at 10% per annum for two years and three years differ by ₹500. Find the sum.

(a)

₹5,500

(b)

₹5,000

(c)

₹6,000

(d)

₹4,500

Answer: (b)

10.

Find a single discount equivalent to a discount series of 10%, 15% and 20%.

(a)

39.20%.

(b)

42.20%

(c)

38.80%

(d)

40.80%

Answer: (c)

11.

A steel sphere of radius 1 cm is melted and cast into a wire of diameter 4 mm, then the length of the wire is:

(a)

$31\frac{1}{3}$ cm

(b)

$35\frac{1}{7}$ cm

(c)

$37\frac{1}{7}$ cm

(d)

$33\frac{1}{3}$ cm

Answer: (d)

12.

A and B can do a piece of work in 10 days. B and C can do the same work in 15 days. If A is twice as good a workman as C, find in what time B alone can do the work (in days).

(a)

10

(b)

25

(c)

20

(d)

30

Answer: (d)

13. Study the given table and answer the question that follows. The tables shows the number of pages printed by four printers in three days.

Days	Printers			
	M	N	O	P
Friday	880	885	877	898
Saturday	972	989	990	786
Sunday	980	790	782	690

If the total number of pages printed by all the given printers together on Monday was 15% more than the total number of pages printed by all the given printers together on Friday, then what was the total number of pages printed by all the given printers together on Monday?

(a) 4071

(b) 4026

(c) 4580

(d) 4128

Answer: (a)

14.

A sum of ₹15,000 was lent for 3 years at the rate of 4%, 5%, 6% per annum, respectively, at compound interest for the first year, second year and third year compounded annually. Find the compound interest for 3 years.

(a)

₹2,380.60

(b)

₹2,382.60

(c)

₹2,362.80

(d)

₹2,380.80

Answer: (c)

15.

In a class of 50 students, there are 30 girls who scored an average of 88 marks. If the class average is 78, what are the average marks of boys?

(a)

72

(b)

63

(c)

80

(d)

83

Answer: (b)

16.

The mean proportion between 17 and some unknown number is 51. What is the unknown number?

(a)

17

(b)

153

(c)

51

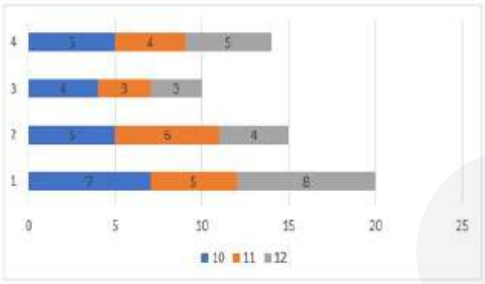
(d)

151

Answer: (b)

17.

Consider the percentage of failed students in class 10, class 11 and class 12 in four different schools: 1, 2, 3 and 4 given in the bar graph.



The difference in the average percentage of failed students per s in school 1 and school 3 is _____.

(a)

$\frac{11}{3}$

(b)

$\frac{8}{3}$

(c)

$\frac{13}{3}$

(d)

$\frac{10}{3}$

Answer: (d)

18.

The weight of a circular disc varies directly as the product of the square of the radius and its thickness. Two identical/similar discs have their thickness in the ratio of 16 : 9. What is the ratio of their radii if the weight of the first is four times that of the second?

(a)

3 : 2

(b)

2 : 3

(c)

1 : 2

(d)

2 : 1

Answer: (a)

19.

Simplify the following expression.

$12 \times 6 \div [\{18 \div (6 - 3)\} - 3] + 6$

(a)

96

(b)

84

(c)

20

(d)

30

Answer: (d)

20.

A certain number of men complete a piece of work in 60 days. If there were 8 more men called, then the work can be finished in 10 days less than usual. The number of men originally was:

(a)

40

(b)

30

(c)

60

(d)

50

Answer: (a)

Reasoning Ability and Problem Solving

1.

Which figure should replace the question mark (?) if the following figure series were to be continued?



(a)



(b)



(c)



(d)



Answer: (d)

2.

What should come in place of ? in the given series?

92 91 87 78 62 ?

(a)

37

(b)

38

(c)

35

(d)

36

Answer: (a)

3.

Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts. You have to decide which conclusion/s logically follow/s from the given statements.

Statements: All clay is metal. Some metal are bricks. All bricks are tablets.

Conclusion I: Some clay are bricks.

Conclusion II: All metal are tablets.

(a)

Both conclusions (I) and (II) are follow

(b)

Only conclusion (II) is follow.

(c)

Neither conclusion (I) nor (II) is follow.

(d)

Only conclusion (I) is follow.

Answer: (c)

4.

In a certain code language, 'just do it' is coded as 'ct ns kw' and 'do your best' is coded as 'mb kw du'. How is 'do' coded in the given language?

(a)

ns

(b)

ct

(c)

kw

(d)

mb

Answer: (c)

5.

78 is related to 69 following a certain logic. Following the same logic, 57 is related to 48. To which of the following is 94 related to, following the same logic?

(a)

83

(b)

85

(c)

82

(d)

84

Answer: (b)

6.

What should come in place of ? in the given series?

124 114 104 94 84 ?

(a)

72

(b)

73

(c)

71

(d)

74

Answer: (d)

8.

Read the given statement(s) and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statement(s).

Statements: All cars are cats. All fans are cats.

Conclusions:

(I) All cars are fans.

(II) Some fans are cars.

(a)

Only conclusion (I) is follows.

(b)

Only conclusion (II) is follows.

(c)

Neither conclusion (I) nor (II) is follows.

(d)

Both conclusions (I) and (II) are follows.

Answer: (c)

9.

In the following number-pairs, the second number is obtained by applying certain mathematical operations to the first number. Select the set in which the numbers are related in the same way as are the numbers of the following sets.
(NOTE: Operations should be performed on the whole numbers, without breaking 'n the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /deleting /multiplying etc. to 1? be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allo
12 : 44
8 : 28

(a)

9 : 32

(b)

7 : 28

(c)

15 : 35

(d)

10 : 38

Answer: (a)

10.

What should come in place of ? in the given series based on the English alphabetical order?

EVO, HSR, KPU, NMX, ?

(a)

RIC

(b)

PHB

(c)

QJA

(d)

PIB

Answer: (c)

11.

What should come in place of ? in the given series based on the English alphabetical order?

MCT, JEU, GGV, DIW, ?

(a)

CJY

(b)

BKZ

(c)

BIY

(d)

AKX

Answer: (d)

13.

What will come in the place of the question mark (?) in the following equation, if '+' and '−' are interchanged and '×' and '÷' are interchanged?

$29 \div 6 + 5 - 98 \times 2 = ?$

(a)

217

(b)

219

(c)

218

(d)

220

Answer: (c)

14.

A, B, C, D, E, F, G and H are sitting around a square table facing the center of the table. Some of them are sitting at the corners while some are sitting at the exact center of the sides. H sits third to the left of B. H does not sit in any of the corners. C sits third to the right of F. C sits in one of the corners. H is the immediate neighbour of D and E. A is not the neighbour of B. E sits immediate next to A.

How many people sit between A and H, when counted from the left of A?

(a)

Three

(b)

Six

(c)

Four

(d)

Five

Answer: (d)

16.

Select the option figure in which the given figure (X) is embedded as its part (rotation is NOT allowed).



(X)

(a)



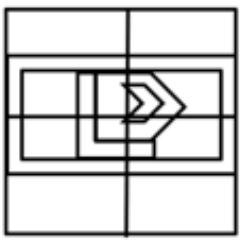
(b)



(c)



(d)



Answer: (d)

18.

The position of how many letters will remain unchanged if each of the letters in the word COMPUTER is arranged in alphabetical order?

(a)
two

(b)
none

(c)
one

(d)
three

Answer: (a)

19.

Select the combination of letters that when sequentially placed in the blanks of the given series, will complete the series.

BA _ B _ B _ _ BB _ B

(a)
ABABB

(b)
AABAB

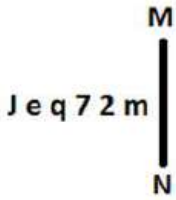
(c)
BABAA

(d)
BAABB

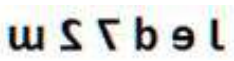
Answer: (c)

20.

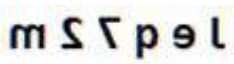
Select the correct mirror image of the given figure when the mirror is placed at MN as shown below.



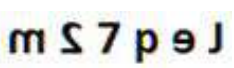
(a)



(b)



(c)



(d)



Answer: (b)

General Awareness

2. The Sakraat festival is celebrated with the 'Budigal' 'Kalasi' dance in _____, where women take part in this dance, carrying decorative pots on t r heads.

(a) Odisha
(b) Nagaland
(c) Madhya Pradesh
(d) Manipur

Answer: (a)

3. The National Social Assistance Programme (NSAP) is a welfare programme being administered by which Ministry of Government of India?

(a) Ministry of Tribal Affairs
(b) Ministry of Home Affairs
(c) Ministry of Agriculture and Farmers Welfare
(d) Ministry of Rural Development

Answer: (d)

4. What is the main source of income for commercial banks?

(a) Donations from customers
(b) Profits from stock market investments
(c) Government grants
(d) Interest earned on loans and advances

Answer: (d)

5. The Taj Mahal was built by:

(a) Humayun

(b) Jahangir

(c) Akbar

(d) Shah Jahan

Answer: (d)

6. Who among the following made Ganesh Chaturthi popular as a public celebration in Maharashtra?

(a) Lokmanya Bal Gangadhar Tilak

(b) Khudiram Bose

(c) Vinayak Damodar Savarkar

(d) Lala Lajpat Rai

Answer: (a)

7. Which country's Constitution was the inspiration behind the Directive Principles of the Indian Constitution?

(a) The Constitution of Australia

(b) The Constitution of the United States

(c) The Constitution of the United Kingdom

(d) The Constitution of Ireland

Answer: (d)

8. When one stone is thrown upwards, what type of energy conversion would occur?

(a) Kinetic energy would change to mechanical energy

(b) Potential energy would change to gravitational energy

(c) Mechanical energy would change to kinetic energy

(d) Kinetic energy would change to gravitational potential energy

Answer: (d)

9. Lack of functional small intestine can cause a malabsorption disorder leading to diarrhoea, malnutrition, weight loss etc. This particular condition is known as:

(a) Down syndrome

(b) short bowel syndrome

(c) hypoglycaemia

(d) hyperglycaemia

Answer: (b)

10. In December 2022, Government of India launched Grih Pravesh scheme. This scheme aims to provide benefits to the residents of ____ areas.

(a) only urban

(b) only rural

(c) only tribal

(d) both rural and urban

Answer: (d)

11. Indian Industrialists reacted against colonial policies that restricted business activities and formed an organisation in 1927. What was it called?

(a) Indian Industrial and Commercial Congress(IICC)
(b) Organization of Industries of India (OII)
(c) Federation of the Indian Chamber of Commerce and Industries (FICCI)
(d) Confederation of Indian Industries (CII)

Answer: (c)

12. Who founded the All-India Forward Bloc Party?

(a) Chandra Shekar Azad
(b) Bhagat Singh
(c) Rasbehari Bose
(d) Subhas Chandra Bose

Answer: (d)

13. The Constitution allows _____ maximum members in Lok Sabha as of June 2023.

(a) 546
(b) 550
(c) 545
(d) 543

Answer: (b)

14. Which of the following novels is based on the par on of India and was written by Khushwant Singh?

(a) The Great Indian Novel
(b) Untouchables
(c) Narcopolis
(d) Train to Pakistan

Answer: (d)

15. Which institution mainly provides financial assistance and support to microfinance institutions in India?

(a) Department of Economic Affairs (DEA)
(b) Ministry of Corporate Affairs
(c) Indian Banks' Association (IBA)
(d) Small Industries Development Bank of India (SIDBI)

Answer: (d)

16. Mango showers are associated with which two states?

(a) Kerala and Karnataka
(b) Uttar Pradesh and Bihar
(c) Kerala and Andhra Pradesh
(d) Andhra Pradesh and Karnataka

Answer: (a)

17.

The Padma Shri awardee (2016) Gulabo Sapera is known as the Queen of _____ dance.

(a)

Chari

(b)

Bhavai

(c)

Kalbeliya

(d)

Kacchi Ghodi

Answer: (c)

19. Lachhu Maharaj is a celebrated _____ dancer.

(a) Kuchipudi

(b) Bharatnatyam

(c) Odissi

(d) Kathak

Answer: (d)

20. What is the name of the mascot for the 37th Nation[illegible] Games?

(a) Jelly

(b) Pandi

(c) Olly

(d) Moga

Answer: (d)

21.

Ustad Allah Rakha and Ustad Zakir Hussain are both famous _____ players of India.

(a)

veena

(b)

bansuri

(c)

tabla

(d)

sarangi

Answer: (c)

22. Manika Batra won bronze medal in Asian Cup tournament. She is related to which sport?

(a) Judo
(b) Chess
(c) Table Tennis
(d) Gymnastic

Answer: (c)

23. What is the name of the geographic feature that serves as a boundary between India and Sri Lanka?

(a) Strait of Gibraltar
(b) Dardanelles Strait
(c) Bosporus Strait
(d) Palk Strait

Answer: (d)

24. FIFA U-17 Women's World Cup 2022 final was held in which city?

(a) Margo
(b) Navi Mumbai
(c) Bhubaneswar
(d) Ahmedabad

Answer: (b)

25. The Tata Iron and Steel Company Limited (TISCC as started in the year _____ at Sakchi in Jharkhand state.

(a) 1989
(b) 1907
(c) 1951
(d) 1975

Answer: (b)

English Language and Comprehension

1. The following sentence has been split into four segments. Identify the segment that contains a grammatical error. By the time I turn thirty / I would had visited every / continent in the world and have gained / a wealth of knowledge and experience.

(a) By the time I turn thirty
(b) a wealth of knowledge and experience
(c) I would had visited every
(d) continent in the world and have gained

Answer: (c)

2. The following sentence has been divided into four parts. Identify the part that contains an error.
(A) It is a /
(B) state of chaos /
(C) since the /
(D) chairman resigned.

(a) D
(b) A
(c) B
(d) C

Answer: (b)

3. Select the most appropriate meaning of the given idiom.

The apple of one's eye

(a) Very cheerful
(b) Very dear
(c) Very nice
(d) Very pleasing

Answer: (b)

4. Select the most appropriate ANTONYM of the given word. Harmony

(a) Adaptability
(b) Clarity
(c) Unity
(d) Conflict

Answer: (d)

5. Select the most appropriate option that can substitute the underlined segment in the given sentence. Pandemics have often been caused by a disease that spreads by physical touch or contact.

(a) are contagious
(b) are vigorous
(c) are robust
(d) are fastidious

Answer: (a)

6. Select the most appropriate meaning of the underlined idiom in the given sentence. The two neighbours will probably stop fighting when pigs fly

(a) When their families meet
(b) When there is magic
(c) Something that is impossible
(d) When it rains

Answer: (c)

7. Select the most appropriate option to fill in the blank.

Her dedication to her work was _____ what anyone had expected.

(a) over
(b) beyond
(c) beside
(d) through

Answer: (b)

8. There is a spelling error in the given sentence. Select the option that contains the INCORRECTLY spelt word. He was in despare because of the expiry of his licence.

(a) expiry
(b) because
(c) licence
(d) despare

Answer: (d)

9. Select the most appropriate ANTONYM of the given word. Demolish

(a) Invite
(b) Criticise
(c) Construct
(d) Appreciate

Answer: (c)

10. Parts of the following sentence have be[illegible]nive[illegible]s options. Select the option that contains an error. Tushar is junior than all his colleagues.

(a) junior than all
(b) is
(c) Tushar
(d) his colleagues

Answer: (a)

11. Select the most appropriate synonym of the given word. Enchanted

(a) Disgusted
(b) Cursed
(c) Appealing
(d) Repelling

Answer: (c)

12. Select the most appropriate meaning of the given idiom. By the skin of your teeth

(a) By a very narrow margin
(b) To be less affected by criticisms and rebuffs
(c) Very protective
(d) Saved by others

Answer: (a)

13. The following sentence has been divided into four parts. Identify the part that contains an error.
(A) One of /
(B) my brothers write /
(C) novels for /
(D) leisure.

(a) D
(b) A
(c) B
(d) C

Answer: (c)

14. The following sentence has been split into four segments. Identify the segment that contains a grammatical error.

Henry is known / as an excellent writer / and good communicator / in English.

(a) as an excellent writer
(b) in English
(c) Henry is known
(d) and good communicator

Answer: (d)

15. Select the option that can be used as a one-word substitute for the given group of words. The arrangement of events or dates in the order of their occurrence

(a) Chronology
(b) Theology
(c) Entomology
(d) Psychology

Answer: (a)

16. Choose the most appropriate meaning of the underlined idiom in the given sentence.

As soon as Rohan learned that he had topped the examination, he was <u>on cloud nine.</u>

(a) Very tense
(b) Very sad
(c) Very happy
(d) Very confused

Answer: (c)

17. Select the most appropriate option that can substitute the underlined segment in the following sentence. His research on the migratory patterns of the birds is <u>run-of-the-mill.</u>

(a) absurd
(b) one in a million
(c) trash
(d) average

Answer: (d)

18. Select the option that rectifies the spelling of the underlined word in the given sentence.

The politician guaranted that he would create jobs if elected.

(a) gurranted
(b) gauaranteed
(c) guarranteed
(d) guaranteed

Answer: (d)

19. Select the most appropriate option to fill in the blank. The old man distributed his property _____ his ten grandchildren equally.

(a) within
(b) among
(c) towards
(d) between

Answer: (b)

20. Select the INCORRECTLY spelt word.

(a) Paraphernalia
(b) Handkerchiefs
(c) Conjuror
(d) Indispensible

Answer: (d)

Passage — for questions 21–25

> In the following passage, some words have be eted. Read the passage carefully and select the most appropriate option to fill in each blank. Medical hand practices have been an integral part of healthcare for centuries, but with technological advancements, machines are (1)_____ taking over. Robotic surgeries, for instance, have become increasingly popular, allowing surgeons to perform complex (2)_____ with minimal invasive techniques. Machine learning and artificial intelligence have transformed medical diagnosis by analysing large amounts of patient data and providing highly detailed medical images. However, there are still challenges to overcome in the use of these technologies in healthcare. For example, the cost of purchasing and maintaining medical machines can be high, and there are concerns around the ethical use of AI in medicine. Nonetheless, it is clear that medical hand practices are (3)_____ to machines, and these developments have the potential to revolutionise the healthcare industry. Additionally, the use of telemedicine and remote monitoring devices allows patients to receive medical care from the (4)_____ of their homes, particularly beneficial for those in rural or remote areas. Furthermore, medical machines provide healthcare professionals with real-time information, (5) _____ them to make informed decisions and adjust treatment plans accordingly.

21. Select the most appropriate option to fill in blank no. 1.

(a) sincerely
(b) partially
(c) gradually
(d) deliberately

Answer: (c)

22. Select the most appropriate option to fill in blank no. 2.
    (a) therapies
    (b) diagnosis
    (c) analysis
    (d) procedures
    Answer: (d)

23. Select the most appropriate option to fill in blank no. 3.
    (a) diminishing
    (b) evolving
    (c) depleting
    (d) stagnating
    Answer: (b)

24. Select the most appropriate option to fill in blank no. 4.
    (a) locality
    (b) comfort
    (c) range
    (d) inconvenience
    Answer: (b)

25. Select the most appropriate option to fill in blank no. 5.
    (a) reimagining
    (b) adapting
    (c) neglecting
    (d) enabling
    Answer: (d)

Answer key

Answer key as marked in the Staff Selection Commission's response sheet. "—" means the sheet did not show it clearly.

Numerical and Mathematical Ability

1	**(c)**	2	**(d)**	3	**(a)**	4	**(a)**	6	**(c)**	7	**(c)**	8	**(d)**	9	**(b)**		
10	**(c)**	11	**(d)**	12	**(d)**	13	**(a)**	14	**(c)**	15	**(b)**	16	**(b)**	17	**(d)**		
18	**(a)**	19	**(d)**	20	**(a)**												

Reasoning Ability and Problem Solving

1	**(d)**	2	**(a)**	3	**(c)**	4	**(c)**	5	**(b)**	6	**(d)**	8	**(c)**	9	**(a)**		
10	**(c)**	11	**(d)**	13	**(c)**	14	**(d)**	16	**(d)**	18	**(a)**	19	**(c)**	20	**(b)**		

General Awareness

2	**(a)**	3	**(d)**	4	**(d)**	5	**(d)**	6	**(a)**	7	**(d)**	8	**(d)**	9	**(b)**		
10	**(d)**	11	**(c)**	12	**(d)**	13	**(b)**	14	**(d)**	15	**(d)**	16	**(a)**	17	**(c)**		
19	**(d)**	20	**(d)**	21	**(c)**	22	**(c)**	23	**(d)**	24	**(b)**	25	**(b)**				

English Language and Comprehension

1	**(c)**	2	**(b)**	3	**(b)**	4	**(d)**	5	**(a)**	6	**(c)**	7	**(b)**	8	**(d)**		
9	**(c)**	10	**(a)**	11	**(c)**	12	**(a)**	13	**(c)**	14	**(d)**	15	**(a)**	16	**(c)**		
17	**(d)**	18	**(d)**	19	**(b)**	20	**(d)**	21	**(c)**	22	**(d)**	23	**(b)**	24	**(b)**		
25	**(d)**																